SOUTH INDIAN MUSIC

BOOK I.

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Note to the Fourth Edition.

The section relating to Theory has been further expanded. The topic of "Concert Programme—some underlying Principles" dealt with in Appendix II is an addition to this edition. A few more Svarajnanam exercises and passages for sight singing and musical dictation have been added.

12th December 1948. THE AUTHOR.

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[4TH EDITION]

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CHAPTER I

INTRODUCTION

Branches of Knowledge.

- Arts (Kala)
  - Ordinary Arts
  - Fine Arts
    - Music
    - Poetry
    - Painting
    - Drawing
    - Sculpture and Architecture
- Sciences (Sastra)

(The Chatushshashti kalas (64 Arts) include ordinary arts and Fine Arts).

Music is the language of emotion. It is one of the fine arts and is the finest of the fine arts. It is concerned with sounds which are calculated to excite pleasant feelings in us. In the case of fine arts like Painting, Sculpture and Architecture, Nature provided man with plentiful ideas. The profuse variety of colours in the plant, animal and mineral kingdom, the rising sun and the setting sun, the azure sky, the inspiring colours of the rainbow and the natural formations and numerous landscapes of architectural beauty on the hill-sides gave him the necessary materials to develop and work upon. But the system of music was developed by the genius of man himself. And for this reason amongst others, music is entitled to be ranked as the greatest of the fine arts.

Music is of universal appeal influencing alike the scholar and the lay person, the old and the young, the man

and the beast. The infant, the cow and the serpent feel the charm of music as per the sloka :—

శిశుర్వేత్తి పశుర్వేత్తి వేత్తి గానరసం ఫణిః ।

Music is one of the God-given gifts to humanity. It has been cultivated from the dawn of human history. It is the noblest of the fine arts. It is the language of pure sound. It has a humanising influence and is a powerful factor in the moulding of one's character. The study and cultivation of music makes one a real gentleman. The cultural benefits that one acquires by a study of the humanities and sciences can be acquired by a diligent study and practice of music. The sense of beauty that is developed in the person contributes to his cultural refinement. The baser instincts in him are suppressed and the nobler instincts developed. Music is the proud and privileged accomplishment of a refined person. It elevates the soul. It is one of the greatest joys of humanity and is the most harmless of pleasures. It is a rich heritage that has come to us from the hoary past.

Music is a language by itself and is capable of expressing subtle thoughts and refined ideas. Just as a poet expresses his thoughts through the medium of words, a composer expresses his thoughts through the medium of musical phrases. Subtler ideas and delicate shades of feeling can be effectively portrayed through the medium of music.

Music is international and knows no barriers of religion, race, caste, creed or dogma. It is the international road to world harmony. Musicians are citizens of the world in the real sense of the term. They contribute to human happiness in a large measure. They are members of a world brotherhood. They shed lustre around them wherever they

go. They are able to please all types of people—from the prince to the peasant. They belong to the world and not to any particular country limited by geographical barriers. When music comes to be universally studied and practised, there will be far less crime in this world and the earth will be a happier place to live in.

Music is both an art (kala) and a science (sastra). Its study and practice result in the development of the intellect and the soul. It removes the coarseness from human thought and expression and gives grace and refinement. In addition, it is a *vidya* and helps one to realise the Supreme within him. Perfect mental peace is attainable through music. A piece of music finely rendered makes the listener forget this mundane existence and lifts him up to a higher plane. He tastes something of the sweet nectar of heavenly bliss—the *Divine Ananda*. Music is thus a priceless treasure.

Music can cheer the moody and soothe the weary. It affords good relaxation to the mind. Its capacity to cure certain ailments has been known from early times. At the conclusion of a concert or bhajana, the participants feel as if they have gone through a process of purification. Nature intended man to cultivate music and attain æsthetic bliss. For this purpose She has bestowed upon him a singing voice—not merely a speaking voice. It is the fundamental right of every child to be taught singing. Music develops the creative and constructive abilities in children. Physiological benefits like the development of healthy lungs accrue by the cultivation of vocal music.

Just as physical exercise serves to keep active every nook and corner of the body, the cultivation and

hearing of good music serves to nourish the nervous system. The delicate fibrils of the inner ear are touched only when the highest type of classical music is heard. Otherwise they tend to become idle structures and lose their responsive nature ere long.

The study and cultivation of music fosters a certain discipline which will help one to lead an orderly and principled life. Such people will not be victims of outbursts of emotional excitement or violent thoughts. Mental and emotional equipoise are attained through the cultivation of music. Music is above all an important factor in removing the feeling of strain from life.

(For further details relating to the greatness of music see the Author's "Teaching of Music" Chapter I.)

Music is an integral part of India's culture. It is styled the *Gandharva Veda.* It is one of the four upa vedas (secondary vedas). God is conceived of as *Nādabrahma*—Embodiment of (musical) Sound. (This concept of God is India's contribution to world's thought). Through *Nādopāsana* or musical meditation many have attained celestial bliss.

There can possibly be only two systems of music—one, in which the music progresses by successions of single notes and the other in which the music progresses by successions of groups of notes, called chords. The individual notes constituting a chord are related to each other according to the laws of consonance. The two systems of music are respectively known as the *melodical* and the *harmonical* systems. The former prevails in the countries of the Orient and the latter in Europe and countries where European civilisation has penetrated. Harmony, which is the *simultaneous* combination of consonant or relative sounds is the dominant feature of Western music. It is a recent deve-

lopment there and is about three centuries old. The builders of the Indian system of music *knew* the principles of harmony. Samvaditva(సంవాదిత్వ) is consonance. The series of consonant intervals are common to both the systems, the order of precedence alone differing in one or two cases. The idea of developing the system along the lines of melody appealed to the Indian musicians more and we are richer to-day on that account. The extensive raga system which is a unique feature of Indian music could not have been evolved, if they had also chosen to develop their music along the lines of harmony. The ideal of *absolute music* has been reached here in the very conception of the raga system. The concept of raga is India's contribution to world's musicology.

The music of the west exhibits the combined strength and wealth derived from union and co-operation, while that of the east displays the exquisite workmanship which can be produced by individual effort. The gamakas (graces) in Oriental Music serve to strengthen, beautify and embellish the notes of a melody and give a peculiar charm and colour to it in much the same way as the harmony accompaniment to the basic melody in Europe. All the possibilities of the melodical system have been fully explored here. To underc stand what pure melody is, one must listen to non-European music. For, in Europe, a melody is always conceived harmonically. Melodic ideas there, are pivoted on relationships of harmony. But in the east, melodies are conceived with a melodic conscience independent of any harmonic ideas. There is a character of universality about Indian music since the language of melody is universal and is intelligible to one and all.

The music of the world started as a melodic stream. After a course, it gave birth to a branch, the harmoni-

stream. The parent stream as well as the branch stream flowed over rich fields and yielded fruitful results. The concept of raga took shape in the regions watered by the melodic stream while the concepts of polyphony, counterpoint and harmony took shape in the regions watered by the branch stream. Adopting the medium of musical expression native to their soil, the composers in the two regions have bequeathed to humanity their invaluable compositions.

From the one-line nature of its music, melodical music is figuratively referred to as one-dimensional music and horizontal music. From the multi-line nature of its music, harmonical music is figuratively referred to as two-dimensional music and vertical music.

Indian music may be styled the *Rāga sangīta* and European music the *Samvāda sangīta*.

The raga system paved the way for the development of Manodharma sangita along systematic lines. In India, every musician is a creative artist. He delights his listeners not only by his scholarly and polished renderings of musical compositions but also by his own improvised music. Thus in an Indian concert, we *not only listen to the music but also to the musician.*

Gamaka is the essence of a melodic system of music. It is the graceful turn or curve given to a note or to a group of notes that emphasises the melodic individuality of a raga.

Indian music and European music are two great musical systems. They stand as the embodiment of two distinct branches of musical thought and expression. They are respectively the perfection of the melodical and harmonical systems of music. Both are great systems and

show the heights to which the genius of man has soared in his anxious search for new forms of musical expression. The composers in both the systems had before them the same ideals, but the methods of approach became different. The raga system, which is the life and soul of Indian music, served the same purpose to the Indian composer as harmony, to the composer in Europe. European music is a single musical system with but minor differentiations here and there due to national temperament. Oriental music comprises a few sub-systems underlying all of which is a basic unity. Indian music is the finest representative and the most highly developed amongst the Oriental systems.

Polyphony did not develop in India ; but *antiphony* has existed here from ancient times. One can hear examples of antiphonal music even now in the Vedic chants of Pandits, in the Bhajanas of Haridasas and in the folk songs sung by women in rural parts.

Vocal music played a dominant part in the development of Indian music from early times. All singing was unisonal. When men and women sang together they sang either in unison or in octaves. In the absence of part-singing, the classification of voices into bass, tenor, alto and soprano, according to the range in absolute pitch was not attempted. Since Indian music is not written in any particular key, the singer here enjoys the freedom to choose any convenient pitch for his key-note (*ādhāra shadja*), a privilege denied to the European singer. The full possibilities of instrumental music, whether solo or orchestral, have not yet been fully explored in India.

Indian music is based on the scale of just intonation. Since European harmony did not develop here, the necessity

for evolving the scale of equal temperament did not arise. Chromatic scales too are not used in Indian Music.

The raga sangita that is in vogue in India is catering to the æsthetic needs of 400 million people-roughly 1/5 of the human race. That system of music deserves to be widely known and studied even by people of other countries.

India is a marvellous country. Her hoary civilization and culture and her numerous languages and dialects have earned for her a unique place in world culture. The snow-clad Himalayas, the mighty Rivers, the holy Prayag, the inspiring Taj, the majestic Gopurams of the South Indian temples and the colossal statue of Gomatesvara at Sravana-belagola (Mysore) are a perennial source of inspiration to those who have the good fortune to claim India as their motherland. Besides being the home of three great religions, She has produced some of the greatest thinkers, poets, seers, religious leaders, jurists, bhaktas, scholars, composers and musicians. India is the home of the Raga system. Her music is the finest example of a true melodic system of music. It is in keeping with her genius that she should have given birth to two sub-systems of music (Hindusthani and Karnatic).

Her hoary musical culture, the richness, variety and prolific character of her musical literature and repertoire, the amazing number and variety of her musical instruments belonging to the chordophonic, aerophonic, membranophonic and autophonic groups and the fine galaxy of musicians and composers produced by her have all earned for her a dignified place in world music.

Indian music is very old. Its literature dates from the beginning of the Christian Era. There was a time

when a single system of music prevailed throughout the length and breadth of India. The division into North Indian (Hindusthani) and the South Indian (Karnatic) system came later on and became more pronounced during the reign of the Moghul Emperors in Delhi. We come across the terms: *Karnatic music* and *Hindusthani music* in the work: *Sangita Sudhakara* of Haripala written between 1309-1312 A. D :—

తదపి ద్వివిధం జ్ఞేయం దక్షిణోత్తర భేదతః।
కర్ణాటకం దక్షిణే స్యాద్ధిందుస్థాని తథోత్తరే ॥

Fundamentally the two systems are similar—the same svaras and srutis being used. It is the peculiar style of singing and the treatment of ragas, based on the very same svaras and srutis, that gives the distinctive colour to the two systems. The modern music of India represents the accumulated musical wisdom of centuries.

Sangita.

Sangita is the Indian term connoting music. *Gandharva tatva* is the science of music. Ancient writers held the view that Vocal music, Instrumental music and Dance, together constituted sangita :—

గీతం వాద్యం చ నృత్యం చ త్రయం సంగీత ముచ్యతే ।

But with the rapid advance made in the realm of pure music, the art of dance was separated and the first two alone were held to constitute sangita by later writers :—

గీత వాద్యోభయం యత్ర సంగీతమితి కేచన ।

NADA

Nāda is musical sound. The whole subject of music relates to nada. Nada gives rise to srutis, and these give rise to svaras and these again to ragas.

Nada admits of the divisions: *Ahata* and *Anahata*. The nada that is heard without the conscious effort of man (or other beings) is anahata. The Nada produced by the conscious effort of man is Ahata.

Anāhata nada is the music of the spheres, the music of Nature and includes the nada emanating from the Muladhara of the human body. All these are audible only to Yogis. Tyagaraja, the great nāda yogi of recent times refers to the greatness of the mūlādhāraja nāda in the first charana of his song "Svara rāga sudhārasa" (Sankarābharana). The perceiving of anahata nada is the object of Yogopāsana. The anahata nada being devoid of æsthetic beauty dœs not afford pleasure to the mind. Hence ahata nada which gives pleasure to the mind is studied. The science and art of music as practised in the world and as cultivated in Heaven relates to ahata nada. This admits of the threefold division: Gita, Vadya and Nritya.

CAUSATION OF NADA

According to Sarngadeva and other writers, the nada is caused thus: The Atma desiring to speak or sing, stirs the mind; the mind strikes the fire abiding in the body; the fire strikes the wind; the wind abiding in the brahmagranthi rising along the upward paths, manifests the sound successively on the navel, the heart, the throat, the head and the mouth. The nada is thus produced by the conjunction of prana and anala and this is referred to by Tyagaraja in the Charana of his Kriti, *Mokshamu galada* (Saramati). In the word nada, *na* denotes prana and *da* denotes fire.

Ahata nāda is classified into:—

(1) Sāriraja—emanating from the human voice.

(2) Nakhaja—emanating from Plucked instruments.

(3) Dhanvija—emanating from bowed instruments.
(4) Vāyuja—emanating from wind instruments.
(5) Charmaja—emanating from skin-covered instruments.
(6) Lohaja—emanating from metallic instruments: cymbals.

SVARA

The basis of all systems of music is the seven notes or svaras. The names of these seven notes and the syllables used for solfa-ing them in Indian and European music are given in the following Table :—

Table I.

No.	Svara Name,	Solfa letters.	
		Indian.	European.
1.	Shadja ..	sa	doh
2.	Rishabha ..	ri	ray
3.	Gandhara ..	ga	me
4.	Madhyama ..	ma	fa
5.	Panchama ..	pa	soh
6.	Dhaivata ..	dha	lah
7.	Nishada ..	ni	si or te

It will be noticed that the syllables, *sa ri ga ma pa dha ni* are only the initial syllables of the full names of the seven svaras, with the exception only of the first note, where *sa* and not *sha* is used. Of the seven svaras, the notes *sa* and *pa* (the tonic and the fifth) do not admit of varieties. The remaining five svaras : *ri ga ma dha ni* admit of two varieties each. The terms *Komal* and *Tivra* are used to describe these

two varieties. Komal svara is the lower note and the tivra svara the higher note. The technical names of these 12 notes, together with their corresponding equivalents in European music are given in Table II below :—

Table II.

SVARA NOMENCLATURE.

No.	Svara Names.		Equivalents in European Music.
1.	Shadja	*Sa*	C
2.	Suddha Rishabha	Komal *Ri*	D flat
3.	Chatussruti ,,	Tivra *Ri*	D
4.	Sadharana Gandhara	Komal *Ga*	E flat
5.	Antara ,,	Tivra *Ga*	E
6.	Suddha Madhyama	Komal *Ma*	F
7.	Prati ,,	Tivra *Ma*	F sharp
8.	Panchama	*Pa*	G
9.	Suddha Dhaivata	Komal *Dha*	A flat
10.	Chatussruti ,,	Tivra *Dha*	A
11.	Kaisiki Nishada	Komal *Ni*	B flat
12.	Kakali ,,	Tivra *Ni*	B

Note—On the Vina finger-board, the first svarsthana gives, Suddha rishabha, second chatussruti rishabha and so on, in as much as the open sārani string gives the shadja.

It is enough that for the present, the student is familiar with the names of these 12 svaras. Shatsruti Rishabha, Suddha Gandhara, Shatsruti Dhaivata and Suddha Nishada are additional names given respectively to the four notes: Sadharana Gandhara, Chatussruti Rishabha, Kaisiki Nishada and Chatussruti Dhaivata and the 12 notes of the gamut are thus expanded to 16. The reason for this as also its utility will appear* later. Calling the same note by two names is nothing peculiar to Indian music. There are instances in European music as well.

Suddha svaras aud Vikrta svaras

The notes *sa* and *pa* which do not admit of varieties are called *achala* svaras or fixed notes. They are also referred to as *avikrta* (changeless) svaras. Suddha svaras, also referred to as *Prakrti* svaras, have the prefix *suddha*. The vikrta svaras have prefixes like chatussruti, shatsruti, sadharana, antara etc. The term suddha svara in modern South Indian music refers to the earliest variety of each note in the ascending scale. Thus of the three varieties of rishabha: suddha, chatussruti and shatsruti, suddha rishabha is the lowest in pitch; likewise, of the three varieties of gandhara: suddha, sadharana and āntara, suddha gandhara is the lowest in pitch and so on.

In North Indian Music however, the term suddha svara now refers to the notes of the Sankarabharana scale. In ancient Indian music, suddha svara signified the notes of the shadja grama (roughly the modern Kharaharapriya or the Kāfi thāt of Hindusthani music). Thus whereas the notes: (suddha) shadja, suddha madhyama and (suddha) panchama have retained their values from ancient times, the

* Also see the Author's "*Melakarta Janya raga Scheme*".

notes suddha rishabha, suddha gandhara, suddha dhaivata and suddha nishada have acquired different values at present.

Suddha scale means a scale of all suddha svaras. In South Indian Music it will be the *Kanakangi,* the first melakarta in the scheme of 72 melas.

CHAPTER II

MUSICOGRAPHY

Notation is the mode of representing music to the eye. It is the method of representing the various notes that we employ in music by a system of letters, signs and symbols. It is intended to play the same part as the letters and characters of a language. Notation is to music what alphabet is to language.

Notation is a powerful aid to memory. One can easily recall to his mind and sing a song learnt and recorded in notation many years back. Practice in singing from sight, passages given in notation develops Svarajnanam.

There are two principal systems of musical notation. One is the staff notation used for writing European music and the other the script (*sa ri ga ma*) notation used for writing Indian music. In the former, music is written on five parallel lines and the position of the note on the line or the space between the lines indicates its pitch. This system has the unique advantage of showing in a graphical manner the rise and fall of pitch. In the latter system, music is written with the solfa letters. Although these letters are written in a straight line and the notes are thus on a dead level, yet solid musical facts are presented to the eye by each solfa letter. The notes start into their places in the musical scale the moment the eyes look at them. The mention of the raga and tala at the top of a melody serves the same purpose as the key-signature at the commencement of a bar in European music. The 'tonic solfa notation' used

in Europe resembles the Indian system in its use of the solfa letters.

Besides these two systems, there is also a third system of notation styled the 'Numerical notation.' This makes use of the first seven numbers,

1 2 3 4 5 6 7

to represent the seven notes and has other suitable symbols to denote the varieties of a note. But this system is limited in its use.

Sa ri ga ma (sargam) Notation

The several signs and symbols used in this notation may be classified into those used to indicate the nature of :—

(1) The musical note
(2) musical time and
(3) other factors.

For the purpose of notation, the four important factors that matter regarding a musical note are :—

1. Its duration.
2. The sthayi to which it belongs.
3. Its variety.
4. Whether played pure or with gamaka.

1. Duration :—

The seven svaras are written as: **s r g m p d n** dropping the vowels in their solfa names. These small letters correspond to the short or hrasva svaras of the Indian scripts: ஸ ரி க ம ப த நி; స రి గ మ ప ద ని and represent by themselves notes of duration of unit time. Unit-time in Indian music is called an *aksharakala*. The dirgha or long svara letters of the Indian scripts: ஸா ரீ கா மா பா தா நீ సా రీ గా మా పా దా నీ represent notes of duration of two units time. Capital letters **S R G M P D N** take the place of these dirgha svaras of the Indian

scripts and represent notes of duration of two aksharakalas. Thus the duration of a short svara letter is one aksharakala; and that of a dirgha or capital svara letter is two aksharakalas.

s	=	1 aksharakala
S	=	2 aksharakalas

A comma placed after a note increases its duration by unit time; and a semicolon placed likewise increases its duration by two units time. Further increase in duration is represented by the addition of requisite commas and semicolons as follows:—

S ,	or	s , ,	=	3 aksharakalas
S ;	or	S , ,	=	4 ,,
S ; ,	or	S , , ,	=	5 ,,
S ; ;	or	S , , , ,	=	6 ,,

and so on.

A horizontal line placed over a note or a group of notes halves the duration of the note or the group. Two such lines reduce the duration to one-fourth; three such lines to one-eighth and so on. Thus in point of duration

$$s = \overline{s\ s} = \overline{\overline{s\ s\ s\ s}} = \overline{\overline{\overline{s\ s\ s\ s\ \underset{\bullet}{s}\ s\ s\ \underset{\bullet}{s}}}} = \underset{\bullet}{1}\ \text{akshara-kala.}$$

$$1 \quad \tfrac{1}{2}\ \tfrac{1}{2} \quad \tfrac{1}{4}\ \tfrac{1}{4}\ \tfrac{1}{4}\ \tfrac{1}{4} \quad \tfrac{1}{8}\ \tfrac{1}{8}\ \tfrac{1}{8}\ \tfrac{1}{8}\ \tfrac{1}{8}\ \tfrac{1}{8}\ \tfrac{1}{8}\ \tfrac{1}{8} \quad 1 \quad ,,$$

The terms Prathama ప్రథమ (first), Dvitiya ద్వితీయ (second), Tritiya తృతీయ (third), and Chaturtha చతుర్థ (fourth) kala, simply indicate the relative degrees of speed of a musical composition or passage. In the Prathama kala, one note is sung to unit time; in the Dvitiya kala, two notes are sung to unit time; in the Tritiya kala, four notes are sung to unit time; in the Chaturtha kala, eight notes are sung to unit time and so on. But if in the Prathama kala, two notes are sung to unit time, the number of notes

sung to unit in the other degrees of speed, will increase in the same proportion.

The madhyamakala and trikala lines should as a rule be placed only above the svara line and not below it, in order to maintain the uniformity of space between the svara line and the corresponding sahitya line.

2. Sthayi :—

A dot placed above a note indicates that it belongs to the higher octave, and a dot placed below a note indicates that it belongs to the lower octave. Thus **s r g m** are higher octave or tara sthayi notes; **n d p m** are lower octave or mandra sthayi notes; **s r g m p d n** are middle octave or madhya sthayi notes.

Ati tara sthayi (the octave above the tara sthayi) and Anumandra sthayi (the octave below the mandra sthayi) notes are written with two dots above and below the notes respectively as follows :—

Ati tara sthayi :—	**s**	**r**	**g**	**m**
Anu mandra sthayi :—	**s**	**r**	**g**	**m**

Thus the compass of the Vina = $3\frac{1}{2}$ octaves

from **p** to **s**

3. Note Variety

The mention of the name of the *raga at the top of a melody indicates what kinds of notes (komal or tivra) are used in that piece. Hence there is no necessity for using

*Even in the case of bhashanga ragas wherein both the varieties of a note occur, it is well known, in which combinations alone the foreign note or the accidental note comes in. (See Book II of this series)

separate symbols to distinguish the note varieties. But in practice, sometimes for the sake of convenience the numerals 1 and 2 are used to denote the komal and tivra varieties respectively. Thus the 12 notes of a sthayi are written as :—

s		p	
r_1	Komal ri	d_1	Komal dha
r_2	Tivra ,,	d_2	Tivra ,,
g_1	Komal ga	n_1	Komal ni
g_2	Tivra ,,	n_2	Tivra ,,
m_1	Komal ma		
m_2	Tivra ,,		

And the notes of the following melakartas are written as follows :—

TABLE III

Melakarta or Scale No,	Name.	Notes.
8	Hanumatodi	$s\ r_1\ \ g_1\ \ m_1\ \ p\ d_1\ \ n_1\ \ \dot{s}$
15	Mayamalavagaula	$s\ r_1\ \ g_2\ \ m_1\ \ p\ d_1\ \ n_2\ \ \dot{s}$
22	Kharaharapriya	$s\ r_2\ \ g_1\ \ m_1\ \ p\ d_2\ \ n_1\ \ \dot{s}$
28	Harikambhoji	$s\ r_2\ \ g_2\ \ m_1\ \ p\ d_2\ \ n_1\ \ \dot{s}$
29	Dhira Sankara bharana	$s\ r_2\ \ g_2\ \ m_1\ \ p\ d_2\ \ n_2\ \ \dot{s}$
65	Mechakalyani	$s\ r_2\ \ g_2\ \ m_2\ \ p\ d_2\ \ n_2\ \ s$

Vowel Changes. The varieties of a svara are also represented by resorting to the *vowel change* in the name of the note. The three varieties of rishabha: suddha rishabha, chatussruti rishabha and shatsruti rishabha are represented as *ra*, *ri* and *ru* respectively; and the three gāndhāra varieties: suddhagāndhāra, sādhārana gāndhāra and antara gāndhāra as *ga*, *gi* and *gu*. Likewise the corresponding varieties of the dhaivata and nishāda are represented as:— *dha* (suddha dha). *dhi* (chatussruti dha), *dhu* (shatsruti dha) and *na* (suddha ni), *ni* (kaisiki ni) and *nu* (kākali ni) respectively. The two madhyama varieties are represented as *ma* and *mi*. This is in a sense *absolute notation* for, the svara letters by themselves indicate their pitch-values without any reference to the ragas in which they figure. For example,

sa ra gu ma pa dha nu sa

sa nu dha pa ma gu ra sa,

by itself indicates that it is the Māyāmālavagaula scale; and

sa ri gu pa dhi sa

sa dhi pa gu ri sa

by itself indicates that it is the Mohana scale and so on.

This device of representing the note varieties by resorting to the vowel change in the name of the note began in India centuries ago. It is found in the Kudimiyamalai Inscription (7th cent. A. D.) in the Pudukottai State. This device is also resorted to in European music in another form. Thus *Des*, *D* and *Dis* denote respectively, suddha rishabha, chatussruti rishabha and shatsruti rishabha.

Tala: Musical time.

Unlike European music, there exists in Indian music, a great number and variety of time-measures or talas. Inorder

to facilitate easy and accurate method of reckoning musical time, six angas have been devised. These are known as the *shadangas* or *six angas* and they are : 1. laghu, 2. drutam, 3. anudrutam, 4. guru, 5. plutam, and 6. kākapādam. Of these, the first three angas alone enter in the formation of the seven principal talas. The time-values of the anudrutam and the drutam are fixed and are unit-time and two units time respectively. While the anudrutam is represented by a crescent thus ◡ the drutam is represented by a circle (full moon) thus O. Tht anudrutam is counted by a beat of the hand ; the drutam is reckoned by a beat of the hand and a waving of the hand. The waving of the hand is called *visarjitam*.

The laghu is represented by a short vertical line thus | Its kriya consists of two parts : (1) the beat of the hand and (2) finger-counts. The beat is performed either by the clapping of hands or by mildly striking on the right thigh with the right-hand. The latter method, is of course possible, only when one sits and sings. The right-hand fingers are used for counting time. In finger-counts, one should start with the little finger and proceed counting in the direction of the thumb. In cases of six and eight finger-counts, the five fingers are counted first ; the remaining finger-counts are completed by starting again from the little finger and counting in the direction of the thumb.

Unlike the drutam and the anudrutam, the time-value of the laghu varies with the change of its jāti. Its time-value can be 3, 4, 5, 7 or 9 units of time. In consequence, these five kinds of laghus are respectively called the Trisra laghu, Chaturasra laghu, Khanda laghu, Misra laghu and Sankirna laghu. These different laghus are represented by

adding to the laghu sign, the numerals, indicative of their total time-value thus :—

$|_3$ $|_4$ $|_5$ $|_7$ $|_9$

The following Table illustrates these points :—

TABLE IV.

Kind of laghu.	Symbol.	Total time-value.	How reckoned.
Trisra laghu	$\|_3$	3 units of time	1 beat + 2 finger--counts
Chaturasra ,,	$\|_4$	4 ,,	1 beat + 3 ,,
Khanda ,,	$\|_5$	5 ,,	1 beat + 4 ,,
Misra ,,	$\|_7$	7 ,,	1 beat + 6 ,,
Sankirna ,,	$\|_9$	9 ,,	1 beat + 8 ,,

The laghu is a constant factor in all the sapta talas. The drutam is absent in the Eka tala. The anudrutam is present only in the Jhampa tāla.

The other three angas: Guru, Plutam and Kākapādam figure in the scheme of the classical 108 talas. These classical time-measures figure in dance music, advanced pallavis and in the Tiruppugazh hymns of Arunagirinathar. Whereas all the six angas figure in the scheme of the 108 talas, the anudrutam, drutam and laghu alone are present in the sapta talas. Historically, the scheme of 108 talas is older. Table V gives the signs and the modes of reckoning these six angas :—

TABLE V.

No.	Name of the anga.	Symbol.	Duration in akshara-kalas.	Kriya or mode of counting.
1	**Anudrutam**	◡	1	One beat.
2	Drutam	O	2	One beat and a waving of the hand or visarjitam.
3	Laghu	$\mid$	*4	A beat and three finger-counts.
4	Guru	8	8	A sasabda laghu and a nis-sabda laghu (also see. P. 23).
	Plutam	$\overset{\mid}{8}$	12	A beat, krushya and sarpini, each consisting of 4 aksharakalas ; or a beat for the first matra and a circling movement of the hand for the remaining two matras.
6	Kakapadam	+	16	A beat, patakam, krushya and sarpini each consisting of 4 aksharakalas.

* This is the chaturasra laghu. There are four other kinds of laghu. See Table IV. on P. 22.

Krushya = **Waving the hand to the left.**
Sarpini = **Waving the hand to the right.**
Patakam = **Lifting up the hand.**

Other Signs

Double bars ‖ asterisks * and wavy lines are other signs used in this notation. Double bars are used to indicate the conclusion of the whole song or a section of a song. Asterisks are used to denote the foreign notes (anya svaras or accidentals) occurring in bhashanga ragas. Wavy lines ~~~~~~ are placed over notes to indicate that those notes are to be shaken and sung or played. An ascending

glide (etra jāru) is represented with the sign ⦣ and a descending glide (irakka jāru) with the sign ⦢.

The letter **r** occuring within brackets thus : **(r)** after an avarta or phrase indicates that the concerned avarta, avartas or phrases, as the case may be, have to be repeated.

Whenever, it is desired that a group of svaras should be played as a single continuous phrase, a sign called a slur ⌒ is placed over that group of svaras. That sign is an indication to the violinist that those svaras should be played in one stroke of the bow and to the flutist, that they should be played in one breath and so on. Sometimes hyphens are used instead of these curved lines. A group of notes between two hyphens, should be played as a single continuous phrase. Phrasings are indicated thus in Indian music. A phrase may consist of three or more notes. One part of a phrase may be in Prathama kāla and another part in madhyamakāla.

In a kriti with sangatis, the constant or the repeating part of the fundamental theme is represented by ,, (ditto) and the altered portion of the theme alone is written in svaras.

Visrānti or Rest. Periods of silence or rest in music are indicated by placing the requisite number of commas and semi-colons within brackets. Thus (,) = a period of rest of one unit duration and (;) = a period of rest of two units duration and so on.

Numerals. The Roman numerals I II III IV V VI VII are used to denote the sapta tālas and the Arabic numerals 3 4 5 7 9 are used to denote the laghu jāti. Thus IV_7 denotes the Misra jāti Jhampa tala and II_3, the Tisra jāti Matya tāla and so on.

In the Scheme of 72 Melakartas, the Roman numerals, I II III IV V VI VII VIII IX X XI XII are used to denote the twelve chakras and the Arabic numerals 1 2 3 4 5 6 placed next to the Roman numerals indicate the serial number of the melakarta within the chakra. Thus III_3 refers to the third mela in the third chakra which is Māyāmālavagaula, the 15th mela in the scheme of 72. Again V_4 refers to the fourth mela in the fifth chakra, which is Harikāmbhoji, the 28th mela in the scheme of 72 and so on.

In violin playing, the numerals 1 2 3 4 are used to denote respectively the forefinger, middle finger, ringfinger and little finger of the left-hand. The numerals, when placed over notes indicate that the particular fingers signified by them should be used for playing those notes. When the note *sa* is to be played on open string, the figure 0 is placed above it. Thus in a violin tuned to Panchama sruti:

0	1	2	3	0	1	2	3
s	**r**	**g**	**m**	**p**	**d**	**n**	$\dot{s}$

will signify that *sa* is to be played on the open 2nd string and the forefinger, middle finger and the ring-finger should be used for playing the notes: *ri ga* and *ma*; and also that *pa* is to be played on the open first string and the remaining three notes, *dha ni sa* to be played similarly. But if the same phrase is noted as:

3	1	2	3	4	1	2	3
s	**r**	**g**	**m**	**p**	**d**	**n**	$\dot{s}$

it will mean that *sa* should be played on the third string with the ring finger and *pa* should be played on the second string with the little finger, and the remaining notes played as before. Similarly a phrase noted like this:—

1	2	3	4
ṡ	ṙ	ġ	ṁ

will mean that the above four notes should be played on the first string by the forefinger, middle finger, ringfinger and the little finger respectively.

It is however not necessary to place these numerals over every note of a passage. In a composition they are placed over only certain notes and the performers can easily infer the fingers for the other notes.

The upward stroke of the bow and the downward stroke of the bow are respectively denoted by the signs: **V** and **⊓**.

Plus and Minus signs. The Atita and the Anāgata eduppus or grahas are denoted by the + and – signs. A piece in anāgata eduppu starting after $\frac{3}{4}$ aksharakala is denoted as – $\frac{3}{4}$; Ex. *Koluvamaregada* in Todi. It means the piece starts after the lapse of $\frac{3}{4}$ aksharakāla from the commencement of the āvarta. Likewise, the atita eduppu of the anupallavi of *Kshinamai tiruga* in Mukhāri will be represented as + $\frac{1}{2}$ which means that the anupallavi starts at half aksharakāla before the commencement of the āvarta.

A song is named after its commencing words or phrases.

Vowel Extensions. In every musical composition intended for singing, there is usually, for every svara letter of the dhātu, a corresponding syllable in the sāhitya. For example, in the 3rd āvarta of the Vignesvara gita of Purandara Dāsa in Malahari rāga, we find that for the musical phrase of six notes there are the six syllables in the Sāhitya :—

r	**m**	**p**	**d**	**m**	**p**
ka	ra	nā	sā	ga	ra

But frequently cases, wherein there are fewer syllables in the sāhitya compared to the number of svaras in the dhātu, arise. In such cases, *vowel extensions* of one or more syllables in the sāhitya are resorted to. For instance, n the second āvarta of the above-mentioned gita, it will be seen that for the six svaras, there are only five syllables in the sāhitya. This sāhitya of five syllables (*sin dhu ra var na)* is sung to the music of six notes by introducing the vowel *u* contained in the second syllable. The music with the sāhitya in this extended form will be written as :—

ṙ	**ṡ**	**d**	**p**	**m**	**p**
sin	dhu	u	ra	var	na

In practice however, instead of actually writing the vowel letter, it is usual to put a dot in its place. The above passage is written as follows :—

ṙ	**ṡ**	**d**	**p**	**m**	**p**
sin	dhu	.	ra	var	na

The dot, in the midst of the sāhitya syllables, indicates therefore that the vowel contained in the syllable preceding it should be sung once. More dots indicate that as many vowels should be introduced and sung.

A dot or dots placed after the syllables, ending with the vowels: *ā* (far) *ee* (thee) *oo* (mood) *a* (may) and *o* (mode), indicate that the corresponding vowels should be sung as many times. In the case of words containing syllables ending with *m* as in *am*ba, or diphthongs as *ai* in k*ai*siki and *au* in g*au*la, the corresponding vowel extensions will be *m*, *e* and *u* respectively. In the case of diphthongs, it is the second of the two component vowels that has to be extended. The following examples will make these points clear :

Examples :

(From Purandara Dāsa's Malahari raga gitas)

	Written as :—	Should be sung as : —
1.	**d p m g r s** chan da mā . . ma சந் த மா . . ம	**d p m g r s** chan da mā ā ā ma சந் த மா ஆ ஆ ம
2.	**d ṡ ṡ d p m p** ke ra ya ni . ra nu கெ ர ய னி . ர நு	**d ṡ ṡ d p m p** ke ra ya ni i ra nu கெ ர ய னி இ ர நு
3.	**d p m g r s** he ma kū . . ta ஹே ம கூ . . ட	**d p m g r s** he ma kū ū ū ta ஹே ம கூ ஊ ஊ ட
4.	**ṙ ṡ d p m p** ga na se . vi ta க ண ஸே . வி த	**ṙ ṡ d p m p** ga na se e vi ta க ண ஸே ஏ வி த
5.	**S r m g r** Lam bo . da ra லம் போ . த ர	**S r m g r** Lam bo o da ra லம் போ ஓ த ர
6.	**r m p d m p** Am . ba . su ta அம் . பா . ஸு த	**r m p d m p.** Am m bā ā su ta அம் ம் பா ஆ ஸு த
7.	**d p m g r s** kun da gau . . ra குந் த கௌ . . ர	**d p m g r s** kun da gau u u ra குந் த கௌ உ உ ர

8. (The Pallavi of Navaraga malika varna.)

Written as	Should be sung as
m m g g r r s ṇ na . . . pai . . . நா . . . பை . . .	**m m g g r r s ṇ** nā ā ā ā pai e e e நா ஆ ஆ ஆ பை இ இ இ

This device of spreading words of fewer syllables over long musical phrases by the introduction of *a*kāram, *i*kāram, *u*kāram etc. really gives charm to vocal music.

Usually for long svaras in the dhatu, there are long syllables in the sahitya and likewise for short notes, short syllables. For example :—

Mohana :— Isa manohari :—

g	**g**	**P**	**P**		**S**	**r**	**g**	**R**	**R**	**g**	**m**	**P**
va	ra	vi	nā	&	Sri	ga	na	na	tham	bha	ja	re
வ	ர	வீ	ணா		ஸ்ரீ	க	ணா	நா	தம்	ப	ஐ	ரே

But exigencies of music may necessitate a short letter of the sahitya to be sung for a long note of the music and vice versa.

While writing the sahitya, the letters should be written in their correct and natural form and not in their extended or contracted form.

Although many of the signs used in modern Indian notation are found in the earlier works on music, yet no systematic attempts were made to write down melodies in notation until recent times. This accounts for the loss of the original music of Jayadeva's Ashtapadi Hymns, the Tevara Hymns of the Tamil Saivite Saints and other examples of ancient music.

In printed or written music, the following data are furnished. The name of the raga and tala of the piece are given at the top. At the top left-hand corner are given the tempo and marga of the piece and the serial number of the melakarta from which the raga is derived, if the raga happens to be a janya raga. At the top right-hand corner is given the arohana and avarohana of the raga. In order to facilitate the easy reading of the svara and the sahitya (music and the words) it is usual to print the svaras in types slightly bigger than those used for the sahitya. Usually, all the Indian melodies are in the chaturasra gati. Deviations into other gatis like trisra gati, khanda gati, misra gati and

sankirna gati are specially indicated. The grace notes are not printed in every case. They are readily understood and supplied instinctively by a musician, who is conversant with the raga.

In a highly developed melodic system of music, it will not be possible to represent in notation every refinement in rendering. Rendering is an art dependant upon the artistry, power of interpretation and musical intelligence of the performer,

CHAPTER III

TECHNICAL TERMS

Adi tala, a variety of triputa tala, consisting of a chaturasra laghu and two drutams : | O O
4+2+2=8 aksharakalas.

Ahata nada, music made by the effort of man.

Aksharakala, unit time in music.

Alankara, beauty, ornament, embellishment, grace; svara-group pattern. Also the svara exercises illustrating the seven principal talas and their varieties.

Alapana, Alapa, *Alapti*, development of a raga.

Anahata nada, music of Nature.

Anga, one of the tala dasa pranas; also section of a musical composition.

Antara gandhara, the tivra variety of gandhara (E); frequency 5/4

Anudrutam, one of the six angas used in reckoning musical time; consists of a beat; duration one aksharakala; symbol ◡.

Anumandra sthayi, the octave below the mandra sthayi.

Anusvaram, a secondary note played along with the note of a melody for decorative effect. Anusvaras are used in raga alapana as well.

Arohana, a series of notes in the ascending order of pitch : *s r g m p d n ṡ*

Arohana and Avarohana of a raga, the recognised order or *krama* in which the notes ascend and descend in a raga, It defines the contour of the raga.

Ata tala, the sixth of the seven principal talas; consists of two laghus and two drutams : | | O O

Ati tara sthayi, the octave above the tāra sthāyi.

Avarohana, a series of notes in the descending order of pitch ' *s n d p m g r s.*

Avarta a complete tala or time-measure.

Bheda variety, difference.

Chaturasra laghu, a variety of laghu consisting of a beat and three finger-counts : $|_4$

Chaturtha kala, fourth degree of speed.

Chatussruti dhaivata the tivra variety of dhaivata frequency 27/16.

Chatussruti rishabha, the tivra variety of rishabha (D) ; frequency 9/8.

Datu varisas, svara exercises containing dātu svara combinations like *s g r m g p, n p d m p g* etc.

Dha, the solfa name of dhaivata ; also the sixth note of the scale.

Dhaivata, the sixth note of the scale.

Dhruva tala, the first of the seven principal talas : consists of a laghu, drutam and two laghus | O | |

Dirgha, long ; the time-value of a dirgha svara is two aksharakālas.

Dravidian Music, the system of music that was in vogue amongst the Ancient Tamils. Kural குரல், Tuttam துத்தம், Kaikkilai கைக்கிளை, Ulai உழை, Ili இளி, Vilari விளரி, and Tāram தாரம், were the names given to the seven notes of the scale in that system.

Drutam, one of the six angas used in reckoning musical time ; consists of a beat and waving of the hand ; duration two aksharakālas ; symbol **O**

Druta kala, fast or quick tempo.

Druta laya, quick speed.

Dvitiya kala, second degree of speed.

Eka tala, the last of the seven principal talas; consists of a laghu only; symbol |

Ga, the solfa name of gandhara; also the third note of the scale.

Gamaka, the collective term given to the various shakes, graces, ornaments and embellishments used in Indian music. Gamakas are produced by the shake or quiver of the notes in a peculiar way and they please the istener:—

స్వరస్య కంపో గమకః శ్రోతృచిత్త సుఖావహః।

Gamaka is inseparable from even the simplest phrase. It is not a mere accidental ornament but is an essential part of the melodic structure. Gamaka is an integral part of the music and the note with its grace makes one utterance. Gamakas lend colour to Indian music in much the same way as harmony to European music.

Gandhara, the third note of the scale.

Gandharvam, music.

Gandharva tatva, science of music.

Gandharva veda, sangita; one of the four upa vedas.

Ghata, beat or clapping of the hands; one of the modes of reckoning musical time.

Guru, one of the six angas used in reckoning musical time; consists of a beat and a circling movement of the hand with closed fist; also reckoned as a sasabda laghu and a nisssabda laghu. Duration eight aksharakalas; Symbol 8

Hechchusthayi, higher octave.

Hechchusthayi varisas, svara exercises using the higher octave notes.

Hrasva, short; the duration of a hrasva svara is one aksharakāla.

Jati ஜாதி, ne of the tala dasa pranas; refers to the variety of laghu.

Janta varisas, svara exercises in double notes :

s s *r r* *g g* *m m* etc.

Jhampa tala, the fourth of the seven principal talas; consists of a laghu, anudrutam and drutam; symbol | ∪ O

Kaisiki nishada, the komal variety of nishada (B flat). frequency *9/5*

Kakali nishada, the tivra variety of nishada (B): frequency *15/8*

Kakapadam, one of the six angas used in reckoning musical time; consists of a beat, patākam, krushya and sarpini, the duration of each of these four kriyas being four aksharakalas or one matra. Symbol +

Kala கலா, one of the tala dasa pranas: minute division of an aksharakala.

Kalam காலம், one of the tala dasa pranas, signifying absolute measure of time; musical speed; tempo; the degree of movement or pace of a musical composition.

Khanda laghu, a variety of laghu consisting of a beat and four finger-counts: $|_5$

Kriya, one of the tala dasa pranas; mode of reckoning musical time.

Krushya, waving the hand to the left.

Laghu, one of the six angas used in reckoning musical time; consists of a beat and a variable number of finger-counts according as its jati is trisra, chaturasra, khanda, misra or sankirna; symbol |

Laya, one of the tala dasa pranas; musical time; tempo; rhythm; speed.

Layajnanam, an accurate sense of rhythm.

Ma, the solfa name of madhyama; also the fourth note of the scale.

Madhyama, the fourth note of the scale.

Madhyama kala, moderate speed or tempo.

Madhya laya, medium speed.

Madhya saptaka, middle octave.

Madhya sthayi, middle octave.

Mandra saptaka, lower octave.

Mandra sthayi, lower octave.

Matra, unit of time-measure in the scheme of 108 talas. A matra = 4 aksharakalas.

Matya tala, the second of the seven principal talas; consists of a laghu, drutam and laghu | O |

Misra laghu, a variety of laghu consisting of a beat and six finger-counts: | 7

Musical alphabets, *sa ri ga ma pa dha ni*

Musicography, the science of writing music in correct notation.

Musicology, the science of music; sangita sastra.

Nada. (1) music, musical sound; admits of the varieties, ahata and anahata; (2) the tone of a musical instrument. *e.g.,* we say the nada of one vina is superior to that of another vina.

Ni, the solfa name of nishada ; also the seventh note of the scale.

Nicha sthayi, lower octave.

Nishada, the seventh note of the scale.

Nissabda kriya, a kriya without sound ; ex. visarjitam.

Pa, the solfa name of Panchama; also the fifth note of the scale.

Panchama, the fifth note of the scale ; frequency 3/2

Patakam, lifting up the hand.

Plutam, one of the six angas used in reckoning musical time; consists of a beat, krushya and sarpini, the duration of each of these three kriyas being four aksharakalas or one matra ; symbol $\overset{|}{8}$

Prakruti svara, natural note.

Prathama kala, first degree of speed.

Prati madhyama, the tivra variety of madhyama (F sharp) ; frequency 45/32.

Purvanga, (1) the lower tetrachord *s r g m*. (2) Also the first half of a varna comprising the pallavi, anupallavi and muktayi svara.

Raga, literally, that which creates passion; melody-mould or melody-type.

Ri, the solfa name of Rishabha ; also the second note of the scale.

Rishabha, the second note of the scale.

Rupaka tala, the third of the seven principal talas ; consists of a drutam and a laghu O |

Sa, the solfa name of shadja; also the first note of the scale.

Sadharana gandhara, the komal variety of gandhara (E flat) ; frequency 6/5

Sahitya, words of a musical composition ; libretto.

Sangita, music.

Sangati, variation on a musical theme.

Sankirna laghu, a variety of laghu, consisting of a beat and eight finger-counts : | 9

Sapta, seven.

Saptaka, the seven notes of the gamut: *s r g m p d n* sthayi, octave, register.

Sapta svaras, the seven notes: Shadja, Rishabha. Gāndhāra, Madhyama, Panchama, Dhaivata, Nishada.

Sapta talas, the seven talas: Dhruva, Matya, Rupaka, Jhampa, Triputa, Ata, Eka.

Sarali, shortened form of svaravali.

Sarpini, waving the hand to the right.

Sasabda kriya, a kriya accompanied by sound ; ex., beat or ghāta ; cauterization.

Shadangas, the six angas or modes of reckoning musical time: Anudrutam, Drutam, Laghu, Guru, Plutam and Kākapādam.

Shadja, the first note of the scale.

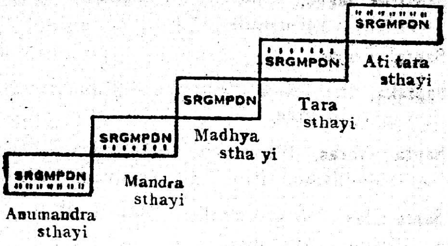
Shatsruti dhaivata, the variety of *dha* above the chatussruti dhaivata and theoretically the same as the note kaisiki nishada.

Shatsruti rishabha, the variety of *ri* above the chatussruti rishabha and theoretically the same as the note, sadharana gandhara.

Sruti, (1) the (smallest) audible sound ; the sound which can be distinctly heard ; quarter-tone ; microtone, enharmonic note or interval. (2) key note or adhara shadja.

Sthana, the term for sthayi in ancient music.

Sthayi, sthana; saptaka; voice register; octave; a series of seven swaras beginning from *sa* and ending with *ni*. The five sthayis used in Indian music are as follows :—



Suddha dhaivata, the komal variety of dhaivata (A flat) frequency 8/5.

Suddha gandhara, the variety of *ga* below the sadharana gandhara and theoretically the same as the note chatussruti rishabha. Also the first gandhara note (frequency 32/27) in in the scale of 22 srutis.

Suddha madhyama, the komal variety of madhyama; (F); frequency 4/3

Suddha nishada, the variety of *ni* below the kaisiki nishada and theoretically the same as the note chatussruti dhaivata. Also the first nishada note (frequency (16/9) in the scale of 22 srutis.

Suddha rishabha. the komal variety of rishabha (D flat), frequency 16/15.

Svara, literally that which pleases of its own accord musical note or interval.

Svarajnana, A person is said to have svarajnana, when (1) he is able to distinguish, recognise and write down the notes of a musical passage or phrase sung, played or heard; and (2) he is able to sing correctly a given passage in notation.

Svaravali, the preliminary svara exercises; vocalises.

Tala, musical time or measure.

Tara Saptaka, higher octave.

Tara Sthayi, higher octave.

Tattu தட்டு, ghata; beat; one of the modes of reckoning musical time.

Triputa tala, the fifth of the seven principal talas; consists of a laghu and two drutams | O O

Trisra laghu, a variety of laghu consisting of a beat and two finger-counts: | 3

Tritiya kala, third degree of speed,

Uchcha sthayi உச்ச ஸ்தாயி, higher octave.

Uttaranga, (1) the higher tetrachord *p d n s*; (2) also the second half of a varna comprising the charana and the ettugada svaras.

Vichchu விச்சு, waving of the hand; visarjitam; one of the modes of reckoning musical time.

Vikrta svara, a svara other than a suddha svara.

Vilambita kala, slow speed or tempo.

Vilambita laya, slow speed.

Visarjitam, waving of the hand; one of the modes of reckoning musical time.

Vocalises, vocal exercise or study sung either to vowels or solmisation syllables.

Vusi, visarjitam.

CHAPTER IV

VOCALISES

The svara exercises given in this book should first be practiced in the Mayamalavagaula scale. This raga, it will be remembered takes the svaras: Shadja, Suddha Rishabha Antara Gandhara, Suddha Madhyama, Panchama, Suddha Dhaivata and Kakali Nishada. When the students become thoroughly familiar with this scale, these svara exercises may be practised in the Sankarabharana, Harikambhoji, Kharaharapriya, Kalyani and Hanumatodi scales at the option of the teacher.

Since the days of Purandara Das, South India has profited by adopting the Māyamalavagaula as the starting scale for beginners in music. In Northern India, music students begin with the Bilaval (Sankarabharana) and in European music also they begin with the Major scale (Sankarabharana). Hence South India is unique in this respect. Ramamatya in his *Svaramela-kalanidhi* calls Mayamalavagaula as the best of all ragas:

రాగో మాళవగౌళశ్చ రాగాణాముత్తమోత్తమః

By practising svara exercises first in this raga, students become early acquainted with semi-tonal intervals. Further this raga takes svaras about whose nature there is no controversy. Svaras with dual names do not come here. This raga is also an auspicious raga. This is the only sampurna raga that contains 4 pairs of notes separated by an interval of a semi-tone. The notes of each pair

belong to contiguous svarasthanas on the vina. The purvanga and uttaranga of this raga are symmetrical.

Further through Mayamalavagaula, the student becomes familiar with three types of intervals figuring in the 72 Melakartas :—

(*a*) Dvisruti interval (semitone) between *g* and *m* ; and between *n* and $\dot{s}$

(*b*) Chatussruti interval (Major tone) between *m* and *p*

(*c*) Shatsruti interval (augmented interval) between *r* and *g* ; and between *d* and *n*

ABHYASA GANA

SRUTI SVARA EXERCISES

Lesson 1.

1.	S S	P P	$\dot{S}$ $\dot{S}$	
	$\dot{S}$ $\dot{S}$	P P	S S	
2.	s s s s	p p p p	$\dot{s}$ $\dot{s}$ $\dot{s}$ $\dot{s}$	
	$\dot{s}$ $\dot{s}$ $\dot{s}$ $\dot{s}$	p p p p	s s s s	
3.	S s s	P p p	$\dot{S}$ $\dot{s}$ $\dot{s}$	
	$\dot{S}$ $\dot{s}$ $\dot{s}$	P p p	S s s	
4.	S s s	s s P	s s P	s p $\dot{S}$
	$\dot{S}$ $\dot{s}$ $\dot{s}$	$\dot{s}$ $\dot{s}$ P	$\dot{s}$ $\dot{s}$ P	$\dot{s}$ p S ||

Lesson 2.

1.	s r g m	p d n ṡ	S ;	S ;
	ṡ n d p	m g r s	Ṡ ;	Ṡ ;
2.	s r g m	p d n ṡ	Ṡ ;	P ;
	ṡ n d p	m g r s	S ;	P ;
3.	s r g m	p d n ṡ	Ṡ Ṡ	P P
	ṡ n d p	m g r s	S S	P P
4.	s r g m	p d n ṡ	Ṡ P	Ṡ P
	ṡ n d p	m g r s	S P	S P
5.	s r g m	p d n ṡ	ṡ ṡ ṡ ṡ	p p p p
	ṡ n d p	m g r s	s s s s	p p p p
6.	s r g m	p d n ṡ	ṡ ṡ p p	ṡ ṡ p p
	ṡ n d p	m g r s	s s p p	s s p p ‖

Lesson 3
TABLE VI

Showing the method of singing each of the following Sarali exercises in the Prathama, Dvitiya, Tritiya and Chaturtha kalas

15th Melakarta — Mayamalavagaula—Adi — s r g m p d n s / s n d p m g r s

Kala	I₄	O	O
Prathama or the 1st kala	s r g m	p d	n s
	s n d p	m g	r s
Dvitiya or the 2nd kala	sr gm pd ns	sn dp	mg rs
Tritiya or the 3rd kala	srgm pdns sndp mgrs	srgm pdns	sndp mgrs
Chaturtha or the 4th kala	srgmpdns sndpmgrs srgmpdns sndpmgrs	srgmpdns sndpmgrs	srgmpdns sndpmgrs

TABLE VII.

Showing the method of singing **s r g m p d n ṡ ṡ n d p m g r s** in the Prathama, Dvitiya and Tritiya kalas (and vice versa) at a stretch, within the space of one Aditala avarta

A

| 4	O	O
s r g m Prathama kala	**p d n ṡ** Dvitiya kala	**ṡ n d p m g r s** Tritiya kala

B

s r g m p n d ṡ (Tritiya kala) **ṡ n d p** (Dvitiya kala)	**m g** Prathama	**r s** kala

SVARAVALI

Lesson 4.

1.	s r g m	p d n ṡ	ṡ n d p	m g r s
2.	s r g m	s r g m	s r g m	p d n ṡ
	ṡ n d p	ṡ n d p	ṡ n d p	m g r s
3.	s r g m	s r s r	s r g m	p d n ṡ
	ṡ n d p	ṡ ṅ s n	ṡ n d p	m g r s
4.	s r g m	P P	s r g m	p d n ṡ
	ṡ n d p	M M	ṡ n d p	m g r s
5.	s r g m	P - s r	s r g m	p d n ṡ
	ṡ n d p	M - ṡ n	ṡ n d p	m g r s
6.	s r g m	p m g r	s r g m	p d n ṡ
	ṡ n d p	m p d n	ṡ n d p	m g r s
7.	s r g m	p m d p	s r g m	p d n ṡ
	ṡ n d p	m p g m	ṡ n d p	m g r s
8.	s r g m	r g m p	s r g m	p d n ṡ
	ṡ n d p	n d p m	ṡ n d p	m g r s
9.	s r g m	P - g m	P ;	P ;
	g m p d	n d p m	g m p - g	m g r s
10.	Ṡ n d	N d p	D p m	P P
	g m p d	n d p m	g m p - g	m g r s
11.	s r g r	G - g m	p m P	d p D
	m p d p	d n d p	m p d p	m g r s
12.	s r g m	P P	d d P	m m P
	d n S	ṡ n d p	ṡ n d p	m g r s

Lesson 5.

1.	s r s r	s r g m	s r g m	p d n s
	s n s n	s n d p	s n d p	m g r s
2.	s r g - s	r g - s r	s r g m	p d n s
	s n d - s	n d - s n	s n d p	m g r s
3.	s r g m	s m g r	s r g m	p d n s
	s n d p	s p d n	s n d p	m g r s
4.	s r g m	p d - s r	s r g m	p d n s
	s n d p	m g - s n	s n d p	m g r s
5.	s r g m	p d N	s r g m	p d n s
	s n d p	m g R	s n d p	m g r s
6.	s s n d	n n d p	d d p m	P P
	g m p d	n d p m	g m p - g	m g r s

HECHCHUSTHAYI VARISAS

Lesson 6.

1.	s r g m	p d n s	S ;	S ;
	d n s r	s n d p	s n d p	m g r s
2.	s r g m	p d n s	S ;	S ;
	d n s r	s s r s	s r s n	d p m p
	d n s r	s n d p	s n d p	m g r s

3.	s r g m	p d n s	S ;	S ;
	d n s r	g r s r	s r s n	d p m p
	d n s r	s s r s	s r s n	d p m p
	d n s r	s n d p	s n d p	m g r s
4.	s r g m	p d n s	S ;	S ;
	d n s r	g m g r	s r s n	d p m p
	d n s r	g r s r	s r s n	d p m p
	d n s r	s s r s	s r s n	d p m p
	d n s r	s n d p	s n d p	m g r s

*Lesson 7.

1.	s r g m	p d n s	S ;	S ;
	s r g - r	r s - n s	r-s s n	d n s-n
	n d - p d	n-d d p	m p d-p	p m - g m
	p-m m g	m p d n	s n d p	m g r s
2.	s r g m	p d n s	S ;	S ;
	s r G	r s - n s	R s n	d n S
	n d - p d	N d p	m p D	p m - g m
	P m g	m p d n	s n d p	m g r s

MANDRA STHAYI VARISAS

Lesson 8.

1.	s n d p	m g r s	S ;	S ;
	g r s n	s r g m	s r g m	p d n s
2.	s n d p	m g r s	S ;	S ;
	g r s n	s s n s	s n s r	g m p m
	g r s n	s r g m	s r g m	p d n s
3.	s n d p	m g r s	S ;	S ;
	g r s n	d n s n	s n s r	g m p m
	g r s n	s s n s	s n s r	g m p m
	g r s n	s r g m	s r g m	p d n s
4.	s n d p	m g r s	S ;	S ;
	g r s n	d p d n	s n s r	g m p m
	g r s n	d n s n	s n s r	g m p m
	g r s n	s s n s	s n s r	g m p m
	g r s n	s r g m	s r g m	p d n s
	s n d p	m g r s	S ;	S ;

JANTA VARISAS

Lessoa 9.

1.	s s r r	g g m m	p p d d	n n s s
	s s n n	d d p p	m m g g	r r s s
2.	s s r r	g g m m	r r g g	m m p p
	g g m m	p p d d	m m p p	d d n n
	p p d d	n n s s	s s n n	d d p p
	n n d d	p p m m	d d p p	m m g g
	p p m m	g g r r	m m g g	r r s s
3.	s s r r	g g r r	s s r r	g g m m
	r r g g	m m g g	r r g g	m m p p
	g g m m	p p m m	g g m m	p p d d
	m m p p	d d p p	m m p p	d d n n
	p p d d	n n d d	p p d d	n n s s
	s s n n	d d n n	s s n n	d d p p
	n n d d	p p d d	n n d d	p p m m
	d d p p	m m p p	d d p p	m m g g
	p p m m	g g m m	p p m m	g g r r
	m m g g	r r g g	m m g g	r r s s

4.	S s	R r	g g	s s r r	g g m m
	R r	G g	m m	r r g g	m m p p
	G g	M m	p p	g g m m	p p d d
	M m	P p	d d	m m p p	d d n n
	P p	D d	n n	p p d d	n n s s
	S s	N n	d d	s s n n	d d p p
	N n	D d	p p	n n d d	p p m m
	D d	P p	m m	d d p p	m m g g
	P p	M m	g g	p p m m	g g r r
	M m	G g	r r	m m g g	r r s s

5.	s S	r R	g g	s s r r	g g m m
	r R	g G	m m	r r g g	m m p p
	g G	m M	p p	g g m m	p p d d
	m M	p P	d d	m m p p	d d n n
	p P	d D	n n	p p d d	n n ṡ ṡ
	ṡ Ṡ	n N	d d	ṡ ṡ n n	d d p p
	n N	d D	p p	n n d d	p p m m
	d D	p P	m m	d d p p	m m g g
	p P	m M	g g	p p m m	g g r r
	m M	g G	r r	m m g g	r r s s
6.	s s s	r r r	g g	s s r r	g g m m
	r r r	g g g	m m	r r g g	m m p p
	g g g	m m m	p p	g g m m	p p d d
	m m m	p p p	d d	m m p p	d d n n
	p p p	d d d	n n	p p d d	n n ṡ ṡ
	ṡ ṡ ṡ	n n n	d d	ṡ ṡ n n	d d p p
	n n n	d d d	p p	n n d d	p p m m
	d d d	p p p	m m	d d p p	m m g g
	p p p	m m m	g g	p p m m	g g r r
	m m m	g g g	r r	m m g g	r r s s
7.	s s r	s s r	s r	s s r r	g g m m
	r r g	r r g	r g	r r g g	m m p p
	g g m	g g m	g m	g g m m	p p d d
	m m p	m m p	m p	m m p p	d d n n
	p p d	p p d	p d	p p d d	n n ṡ ṡ
	ṡ ṡ n	ṡ ṡ n	ṡ n	ṡ ṡ n n	d d p p
	n n d	n n d	n d	n n d d	p p m m
	d d p	d d p	d p	d d p p	m m g g

p p m	p p m	p m	p p m m	g g r r
m m g	m m g	m g	m m g g	r r s s

8.

s s r r g	s r g	s s r r	g g m m
r r g g m	r g m	r r g g	m m p p
g g m m p	g m p	g g m m	p p d d
m m p p d	m p d	m m p p	d d n n
p p d d n	p d n	p p d d	n n s s
s s n n d	s n d	s s n n	d d p p
n n d d p	n d p	n n d d	p p m m
d d p p m	d p m	d d p p	m m g g
p p m m g	p m g	p p m m	g g r r
m m g g r	m g r	m m g g	r r s s

9.

S s s	R r r	G g g	M m m
P p p	D d d	N n n	S s s
S s s	N n n	D d d	P p p
M m m	G g g	R r r	S s s

10.

S s s	R r r	G g g	M m m
R r r	G g g	M m m	P p p
G g g	M m m	P p p	D d d
M m m	P p p	D d d	N n n
P p p	D d d	N n n	S s s
S s s	N n n	D d d	P p p
N n n	D d d	P p p	M m m
D d d	P p p	M m m	G g g
P p p	M m m	G g g	R r r
M m m	G g g	R r r	S s s

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11.	s s s s	r r r r	g g g g	m m m m
	p p p p	d d d d	n n n n	s s s s
	s s s s	n n n n	d d d d	p p p p
	m m m m	g g g g	r r r r	s s s s
12.	s s s s	r r r r	g g g g	m m m m
	r r r r	g g g g	m m m m	p p p p
	g g g g	m m m m	p p p p	d d d d
	m m m m	p p p p	d d d d	n n n n
	p p p p	d d d d	n n n n	s s s s
	s s s s	n n n n	d d d d	p p p p
	n n n n	d d d d	p p p p	m m m m
	d d d d	p p p p	m m m m	g g g g
	p p p p	m m m m	g g g g	r r r r
	m m m m	g g g g	r r r r	s s s s

Lesson 10.

1.	s m g m	r g s r	s s r r	g g m m
	r p m p	g m r g	r r g g	m m p p
	g d p d	m p g m	g g m m	p p d d
	m n d n	p d m p	m m p p	d d n n
	p s n s	d n p d	p p d d	n n s s
	s p d p	n d s n	s s n n	d d p p
	n m p m	d p n d	n n d d	p p m m
	d g m g	p m d p	d d p p	m m g g
	p r g r	m g p m	p p m m	g g r r
	m s r s	g r m g	m m g g	r r s s
	s r s g	s m g r	s s r r	g g m m
	r g r m	r p m g	r r g g	m m p p
	g m g p	g d p m	g g m m	p p d d
	m p m d	m n d p	m m p p	d d n n

p d p n	p s n d	p p d d	n n s s
s n s d	s p d n	s s n n	d d p p
n d n p	n m p d	n n d d	p p m m
d p d m	d g m p	d d p p	m m g g
p m p g	p r g m	p p m m	g g r r
m g m r	m s r g	m m g g	r r s s

Lesson 11.

DATU VARISAS

1.	s r s g	r g m g	s g r g	s r g m
	r g r m	g m p m	r m g m	r g m p
	g m g p	m p d p	g p m p	g m p d
	m p m d	p d n d	m d p d	m p d n
	p d p n	d n s n	p n d n	p d n s
	s n s d	n d p d	s d n d	s n d p
	n d n p	d p m p	n p d p	n d p m
	d p d m	p m g m	d m p m	d p m g
	p m p g	m g r g	p g m g	p m g r
	m g m r	g r s r	m r g r	m g r s
2.	s g s r	g r m g	s m r g	s r g m
	r m r g	m g p m	r p g m	r g m p
	g p g m	p m d p	g d m p	g m p d
	m d m p	d p n d	m n p d	m p d n
	p n p d	n d s n	p s d n	p d n s
	s d s n	d n p d	s p n d	s n d p
	n p n d	p d m p	n m d p	n d p m
	d m d p	m p g m	d g p m	d p m g
	p g p m	g m r g	p r m g	p m g r
	m r m g	r g s r	m s g r	m g r s

CHAPTER V

Sapta Tala Alankaras

The names of the seven principal talas and their constituent angas are given in the following Table. Each of these seven talas admits of five varieties on account of the laghu jati bheda. The 35 Alankaras illustrative of these (7×5) 35 talas are given in Book II.

TABLE VIII

<table>
<tr><th>No.</th><th>Names of the Tala</th><th>Constituent Angas</th></tr>
<tr><td>I</td><td>Dhruva</td><td>| O | |</td></tr>
<tr><td>II</td><td>Matya</td><td>| O |</td></tr>
<tr><td>III</td><td>Roopaka</td><td>O |</td></tr>
<tr><td>IV</td><td>Jhampa</td><td>| ∪ O</td></tr>
<tr><td>V</td><td>Triputa</td><td>| O O</td></tr>
<tr><td>VI</td><td>Ata</td><td>| | O O</td></tr>
<tr><td>VII</td><td>Eka</td><td>|</td></tr>
</table>

ALANKARAS

Lesson 12

1. Dhruva tala—Chaturasra jati (Sreekara tala))

$|_4 \; O \; |_4 \; |_4$

Total Aksharakala ; 4+2+4+4=14.

$\vert_4$	O	$\vert_4$	$\vert_4$
s r g m	g r	s r g r	s r g m
r g m p	m g	r g m g	r g m p
g m p d	p m	g m p m	g m p d
m p d n	d p	m p d p	m p d n
p d n s	n d	p d n d	p d n s
s n d p	d n	s n d n	s n d p
n d p m	p d	n d p d	n d p m
d p m g	m p	d p m p	d p m g
p m g	g m	p m g m	p m g r
m g r s	r g	m g r g	m g r s

II. Matya tala—Chaturasra jati (Sama tala)

$\vert_4$ O $\vert_4$

Total Aksharakala : $4+2+4=10$.

$\vert_4$	O	$\vert_4$
s r g r	s r	s r g m
r g m g	r g	r g m p
g m p m	g m	g m p d
m p d p	m p	m p d n
p d n d	p d	p d n ṡ
ṡ n d n	ṡ n	ṡ n d p
n d p d	n d	n d p m
d p m p	d p	d p m g
p m g m	p m	p m g r
m g r g	m g	m g r s

III. Roopaka tala—Chaturasra jati (Patti tala)

Total Aksharakala : O $\vert_4$ $2+4=6$.

O	$\vert_4$
s r	s r g m
r g	r g m p
g m	g m p d
m p	m p d n
p d	p d n ṡ
ṡ n	ṡ n d p
n d	n d p m
d p	d p m g
p m	p m g r
m g	m g r s

IV. Jhampa tala—Misra jati (Sura tala)
Total Aksharakala : $|_7$ ◡ O $7+1+2=10$.

$\|_7$	◡	O
s r g s r s r	g	M
r g m r g r g	m	P
g m p g m g m	p	D
m p d m p m p	d	N
p d n p d p d	n	S
s n d s n s n	d	P
n d p n d n d	p	M
d p m d p d p	m	G
p m g p m p m	g	R
m g r m g m g	r	S

V. Triputa tala—Trisra jati (Sankha tala)
Total Aksharakala : $|_3$ O O $3+2+2=7$.

$\|_3$	O	O
s r g	s r	g m
r g m	r g	m p
g m p	g m	p d
m p d	m p	d n
p d n	p d	n s
s n d	s n	d p
n d p	n d	p m
d p m	d p	m g
p m g	p m	g r
m g r	m g	r s

VI. Ata tala—Khanda jati (Vidala tala)

Total Aksharakala : $|_5$ $|_5$ O O 5 + 5 + 2 + 2 = 14.

$\vert_5$	$\vert_5$	O	O
s R G	S r G	M	M
r G M	R g M	P	P
g M P	G m P	D	D
m P D	M p D	N	N
p D N	P d N	Ṡ	Ṡ
ṡ N D	Ṡ n D	P	P
n D P	N d P	M	M
d P M	D p M	G	G
p M G	P m G	R	R
m G R	M g R	S	S

VII. Eka tala—Chaturasra jati (Mana tala)

Total Aksharakala : $|_4$ = 4.

$\vert_4$
s. r g m
r g m p
g m p d
m p d n
p d n ṡ
ṡ n d p
n d p m
d p m g
p m g r
m g r s

Additional Examples.

Eka tala — Chaturasra Jāti

| 4	| 4	| 4
s r G	s R g	S r g
r g M	r G m	R g m
g m P	g M p	G m p
m p D	m P d	M p d
p d N	p D n	P d n
d n S	d N s	D n s
s n D	s N d	S n d
n d P	n D P	N d p
d p M	d P M	D p m
p m G	p M g	P m g
m g R	m G r	M g r
g r S	g R s	G r s

CHAPTER VI

ACOUSTICS

Acoustics is that branch of physics, which deals with the study of sounds, their cause and nature. While music is concerned with sounds, which are calculated to excite pleasant feelings in us, acoustics is concerned with the problems of the production, transmission, comparison and perception of sounds in general.

Sound is produced by motion of some kind. In many cases the motion can be perceived by the eye. For example when the string of a Tambura or Vina is plucked, it gives out a sound and at the same time the string swings from side to side. The moment the string is touched by the finger, the motion ceases, and with it, the sound. Thus sound is caused by the vibratory motion of some sounding body.

Musical sounds and noises.—A musical sound produces a continuous pleasing sensation. It is produced by regular and periodic vibrations. But a noise is a confused mixture of many discordant sounds, like the noise of the waves. Noise is the result of non-periodic and irregular vibrations—irregular both in point of time and strength.

It is however difficult sometimes to draw a sharp distinction between a musical sound and a noise. The souud of the ghatam and the kanjira for instance cannot strictly be called musical, but they are some times delightful accompaniments in a music concert.

Musical sounds : their characteristics.

Musical sounds may differ in respect of :—

1. Pitch or frequency (ச்ருதி)
2. Intensity or loudness (அழுத்தம்)
3. Quality or timbre (தன்மை, திறம்)
4. Duration or length (கால அளவு)
5. Plain or Graced utterance (கமகம்)

Pitch is the height or depth of sounds. It is that which distinguishes a note of a higher sruti from a note of a lower sruti. We say that of the two notes **g** and **m,** the pitch of **m** is higher than that of **g.** Since the pitch of a note depends upon the rate of vibration, the pitch or frequency of a note is expressed in terms of vibrations per second.

Pitch is expressed *relatively*, when we say that one note is the panchama or the madhyama of another note. It is expressed *absolutely* when its vibration number or frequency is mentioned.

Intensity.—The intensity or loudness of a sound depends upon the amplitude of vibration of the sounding body. Suppose the sārani string of a Tambura or a Vina is plucked (1) lightly and (2) with some force, as by drawing the string a little further from its position of rest; one is able to distinguish the notes in the two cases easily, for the intensity of one is greater than that of the other. In both the cases, however, since the same string is plucked and all other factors are constant, the pitch remains the same.

There are five causes which affect the intensity of a note when heard at a distance from its source :—

1. Distance of the ear from the sounding body.
2. The amplitude of the vibrations.
3. The density of the air at the place where the sound is produced.
4. The direction of the currents of air.
5. The presence of other sounding bodies in the neighbourhood.

Quality or Timbre.—Suppose the same note is produced on different musical instruments like the flute, vina, violin and the human voice. Even though the sounds are exactly of the same pitch and loudness, yet one can easily say which note is the flute-note and which the vina-note and so on. That characteristic of the musical sound which enables one to recognise the voices of different persons and the notes of various musical instruments is known as *timbre*. Thus the quality or timbre is that which distinguishes a note or sound of one instrument or voice, from the same note or sound of another instrument or voice.

Musical notes may also differ in respect of their length and style of rendering. When we speak of long and short notes, what we mean is, that the duration of the former is longer than that of the latter. A musical note may be rendered in a plain or graced manner according to the raga in which it occurs.

APPENDIX I

Svarajnanam Exercises

The following exercises should be practised by the students under the guidance of the teacher. They should be practised first in the Mayamalavagaula scale and afterwards in the Sankarabharana, Harikambhoji, Kharaharapriya, Kalyani and Todi scales at the option of the teacher. The svaras should be sung slowly, distinctly and correctly.

1. s R　s r G　s r g M　s r g m P

s r g m p D　s r g m p d N　s r g m p d n Ṡ

ṡ N　ṡ n D　ṡ n d P　ṡ n d p M

ṡ n d p m G　ṡ n d p m g R　ṡ n d p m g r S

2. S
s r S
s r g S
s r g m S
s r g m p S
s r g m p d S
s r g m p d n S
s r g m p d n Ṡ　Ṡ
ṡ n Ṡ
ṡ n d Ṡ
ṡ n d p Ṡ
ṡ n d p m Ṡ
ṡ n d p m g Ṡ
ṡ n d p m g r Ṡ
ṡ n d p m g r Ṡ

3.	s R	s G	s M	s P	s D	s N	s S
	s N	s D	s P	s M	s G	s R	s S
4.	s R	r G	g M	m P	p D	d N	n S
	s N	n D	d P	p M	m G	g R	r S

5.	s r g r	r g m g	g m p m	m p d p
	p d n d	d n s n	n s r s	S ;
	s n d n	n d p d	d p m p	p m g m
	m g r g	g r s r	r s n s	S ;
6.	s s r r	s s g g	s s m m	s s p p
	s s d d	s s n n	s s s s	S ;
	s s n n	s s d d	s s p p	s s m m
	s s g g	s s r r	s s s s	S ;
7.	s s r s	s s g r	s s m g	s s p m
	s s d p	s s n d	s s s n	S ;
	s s n s	s s d n	s s p d	s s m p
	s s g m	s s r g	s s s r	S ;
8.	s g r s	r m g r	g p m g	m d p m
	p n d p	d s n d	n r s n	S ;
	s d n s	n p d n	d m p d	p g m p
	m r g m	g s r g	r n s r	S ;
9.	s r S	r g R	g m G	m p M
	p d P	d n D	n s N	s r S
	s n S	n d N	d p D	p m P
	m g M	g r G	r s R	s n S

10. s n s r S   r s r g R   g r g m G   m g m p M

p m p d P   d p d n D   n d n s N   s n s r S

s r s n S   n s n d N   d n d p D   p d p m P
m p m g M   g m g r G   r g r s R   s r s n S

11. s r g r S   r g m g R   g m p m G   m p d p M

p d n d P   d n s n D   n s r s N   s r g r S

s n d n S   n d p d N   d p m p D   p m g m P
m g r g M   g r s r G   r s n s R   s n d n S

12. s n d p d n S   r s n d n s R   g r s n s r G

m g r s r g M   p m g r g m P   d p m g m p D

n d p m p d N   s n d p d n S   S ; ; ;

s r g m g r S   n s r g r s N   d n s r s n D

p d n s n d P   m p d n d p M   g m p d p m G
r g m p m g R   s r g m g r S   S ; ; ;

13. s s S , s   r r R , r   g g G , g   m m M , m

p p P , p   d d D , d   n n N , n   s s S , s

s s S , s   n n N , n   d d D , d   p p P , p
m m M , m   g g G , g   r r R , r   s s S , s ||

14. S s s S ;   R r r R ;   G g g G ;   M ; ; ;

R r r R ;   G g g G ;   M m m M ;   P ; ; ;
G g g G ;   M m m M ;   P p p P ;   D ; ; ;
M m m M ;   P p p P ;   D d d D ;   N ; ; ;

P p p P ;	D d d D ;	N n n N ;	Ṡ ; ; ;
Ṡ ṡ ṡ Ṡ ;	N n n N ;	D d d D ;	P ; ; ;
N n n N ;	D d d D ;	P p p P ;	M ; ;
D d d D ;	P p p P ;	M m m M ;	G ; ; ;
P p p P ;	M m m M ;	G g g G ;	R ; ; ;
M m m M ;	G g g G ;	R r r R ;	S ; ;

APPENDIX II

Concert Programme : Some underlying Principles

Sangita lakshana or the science of music is a thing of gradual growth. The lakshana lives through the lakshya and the latter in its turn looks to the former for guidance and strength. The lakshana of modern Indian music represents the accumulated wisdom of the musical thinkers of the past. Whereas the lakshana of a musical system can be preserved through books, the same is not true of lakshya. The lakshya can be preserved and handed on to futurt generations only by a number of people cultivating the are and learning the compositions. For those people who have neither the time nor the inclination to learn the higher types of musical compositions, concerts of eminent performers are a real boon, for they give them a valuable opportunity to become familiar with them.

With the development of the raga concept, a new chapter begins in the history of art music in India. The desire arose in the minds of rasikas to listen to creative music and the way was gradually paved for the development

of the modern Kachcheri. Concerts of the earlier period consisted mostly of recitals of sacred songs and hymns. There were also the dance dramas, dance concerts and folk plays.

Sangita sabhas have been functioning in South India from the nineties of the last century. These sabhas are perhaps the one place where one can go and listen to the highest type of art music at present. The vidvans who formerly gave concerts in the courts of Rulers were later on, obliged to exhibit their talents in sabhas due to changed circumstances. The kachcheri paddhati, carefully evolved in the samasthanas was later transplanted to the sangita sabhas. The vidvan who formerly delighted in expounding a raga for hours together and earned the encomiums of even his jealous colleagues had to remodel his programme to suit the new type of audience. The modern kachcheri continues the tradition of art music but with this difference that more time is devoted to the rendering of compositions than to creative music.

The modern sangita sabha is not a mere place of entertainment; it is a place where one gets food for musical thought and especially so, when eminent musicians perform. It is also a place where the practising musicians get some intellectual nourishment as well. The sangita sabha is the one place now where the performer can hope to get an enlightened and cultured audience. Naturally he desires to exhibit his musical skill and scholarship there. The concert in a sangita sabha may be styled as a *practical discourse on absolute music*. Full scope is afforded there to the members of the music party to exhibit their collective skill and individual skill.

It is the duty of the audience in a concert hall to give a patient hearing to the musicians. The audience will in

return be amply rewarded with delightful music from them. The performers come there with the avowed object of pleasing the audience and nothing will cheer them more than the fact that the audience enjoyed their performance. An appreciative audience is like a catalytic agent and draws the best from the performer. Members of the audience should particularly take care to see that they do not talk with each other or become restless, when the tambura or some other instrument is being tuned. Nor should they make an entry or exit in the middle of an item.

The modern concert programme is based on certain aesthetic principles. The sequence of the items in a concert has much to do with its sum-total effect. The performers as well as the listening rasikas have had their share in the past in moulding the concert Programme (கச்சேரி பத்ததி). The sequence of *ghana-naya-desya* has been the guiding principle in the chalking out of concert programmes. The musician in former times began with ghana ragas, followed it up with compositions and Pallavi in naya or rakti ragas and concluded the concert with lighter compositions in dēsya ragas. *Concert-worthy* pieces alone were presented in Kachcheris. These pieces in course of time gained added lustre by being handled by illustrious musicians. Classical compositions representative of different styles and composers and pieces which contained intelligent themes for developing niraval and kalpana svaras were sung in concerts. The embroidery of yati patterns and passages containing rhythmical sequences of variegated beauty were noticed in the kalpana svaras. The longer passages of kalpana svaras were finished with fascinating and impressive makutams (crownlike endings.)

One of the first things that a musician should do in a concert is to concentrate on creating the requisite musical

atmosphere. If the musician is not able to create this atmosphere and establish contact with the audience within the first half an hour of his concert, his subsequent performance is bound to fall flat on the ears of the audience. The object in singing ragas like Nata, Kedaram, Kalyani and Hamsadhvani at the commencement of a concert is to create this musical atmosphere. These ragas with tivra svaras are helpful in creating this desired atmosphere. If *Vatapiganapatim* was sung at the commencement of concerts by Maha Vaidyanatha Iyer and other great musicians in the past, it was not only due to the fact that it was a piece in praise of Vigneswara but also because it was in Hamsadhvani. If the same sahitya in praise of Ganapati was set in Punnagavarali or Ahiri, nobody would have bothered to sing it as the first item. Bikshandarkovil Subbarayer, one of the outstanding singers of the last century used to send his tambura players to the concert hall, 15 minutes in advance with instructions to be playing the same till he came. The late Mridangam Narayanasamiappa used to to have two tamburas tuned an octave apart in his bhajanas. In contrast to the dormant or almost silent tamburas of some of the performers in South India, one happily finds two resounding tamburas used by most Hindusthani musicians.

Secondly, the performer has to get into form as quickly as possible. For this purpose the performers in the past used to sing or play tanas in ghana ragas before taking up compositions. Tanas in ghana ragas later gave place to tana varnas. The tana varnas are admirably suited to get the singers and performers into form. Since the mridangam player is also familiar with the varnas, he is able to provide an impressive rhythmical accompaniment and the collective eflect is good both from the point of view of the listener and the performer. Illustrious singers like the late Ramnad

Srinivasa Iyengar, Ananta Rama Bhagavater and Bidaram Krishnappa began their concerts with tana varnas. The more important of the ancient alankaras are melodiously weaved into the fabric of tana varnas. It is a pity that the practice of singing tana varnas at the commencement of concerts is slowly getting out of vogue.

Once the musician gets into form and the requisite musical atmosphere has been created, he can proceed with his programme. It is the practice to follow the tana varna with a few madhyama kala kritis preferably in ragas with antara gāndhāra and then sing pieces in slower tempo. After this, two pieces in madhyamakala may be sung and the detailed alapana of the main raga for the day taken up and followed by the pallavi. The raga and pallavi constitute the heaviest item in a concert and appropriately occupy the central position. The Pallavi is followed by the singing of a padam, javali, ragamalika (composition, or slokas in different ragas), tillana and pieces of a lighter nature. The concert is concluded with a Mangalam and a brief alapana of Madhyamavati. The notes figuring in the Madhyamavati raga are those which occur earliest in the Cycles of Fifths and Fourths and as such have a high degree of concordance. The Madhyamavati alapana at the end when heard will result in a feeling of tranquility. Listeners who choose to stay till the end will realise the importance of listening to the mangalam and the brief alapana of Madhyamavati at the close.

Just as the various devatas in a shrine have their allotted places, so also in a kachcheri the several forms have their allotted places in the programme. Compositions which are hearable and presentable alone should be given in a concert. Concert-worthy compositions are a class by themselves. Concerts should be begun with auspicious ragas.

It is the duty of the sabhas to continue the noble traditions of the Kachcheri paddhati and not allow it to change or even allow the programme to get diluted with many items of a lighter nature.

QUESTIONS

1. Name the seven svaras. Point out which of them admit of varieties and which of them do not.

2. Distinguish between Komal svara and Tivra svara. Are they the same as the flats and sharps of European music? Explain.

3. Give the names of the 12 notes of a sthāyi.

4. Point out the kinds of *r, g, d, n*, that occur in the scales: Hanumatodi, Kharaharapriya, Harikāmbhoji and Mechakalyani?

5. (*a*) Name the raga which takes the following svaras in its arohana and avarohana:—

   Shadja, Suddha Rishabha, Antara Gandhara, Suddha Madhyama, Panchama, Suddha Dhaivata and Kakali Nishada.

   (*b*) Name the raga that would result when the Suddha Rishabha and the Suddha Dhaivata in the above raga are substituted by the Chatussruti Rishabha and Chatussruti Dhaivata

(*c*) If in this new raga, the Suddha madhyama is replaced by the Prati madhyama, which raga would result ?

6. Explain the use of the dot, comma, semi-colon, line, numerals, wavy line, asterisk and double bar in the *sa ri ga ma* notation.

7. Point out the symbols used to denote the following :—

(*a*) Anya svara (*b*) Anumandra sthayi svara (*c*) Kampita svara (*d*) Madhyamakala svara.

8. Distinguish between :—

(*a*) Hrasra svara and Dirgha svara.

(*b*) Prakruti svara and Vikruti svara.

(*c*) Komal svara and Tivra svara.

9. Explain the following terms :—

Aksharakala ; Arohana ; Avarta ; Saptaka ; Purvanga ; Laya ; Gamaka ; Achala svara.

10. Explain the following terms and give their opposites :—

(*a*) Anahata nada (*b*) Avarohana (*c*) Uttaranga (*d*) Komal svara (*e*) Dirgha svara.

11. (*a*) What are the shadangas ? How are they symbolically represented ?

(*b*) Which of the shadangas admits of jāti bhedas ?

12. Name the sapta talas and give their constituent angas.

13. Name the tala that would result if the second laghu of the Matya tala is replaced by a drutam.

14. Give an example for each of the following :—

(*a*) A tala having three laghus.

(*b*) A tala having only one drutam

(*c*) A tala having the anudrutam

(*d*) A tala which has not got the drutam.

15. Give the constituent angas of the following talas .—

(*a*) Matya (*b*) Jhampa (*c*) Triputa (*d*) Ata.

16. Give two examples for each of the following :—

(*a*) A tala whose avarta is equal to fourteen aksharakalas.

(*b*) A tala whose avarta is equal to ten aksharakalas.

17. Write in notation the Jhampa tala Alankara and the Ata tala Alankara.

18. How are the drutam and the anudrutam reckoned ?

19, What are the five kinds of laghus and how are they symbolically represented ?

20. Name three talas which have more than one laghu.

21. Write the second half of the alankara in Ata tala and mention the total member of dirgha svaras figuring therein.

22. Explain what you mean by the terms - Prathama, Dvitiya and Tritiya kalas. If a musician chooses to sing two notes for unit-time in the Prathama kala, how many notes should he sing for a unit-time in the Dvitiya kala and Tritiya kala ?

23. What is the total time-value of a tala which consists of :—

(1) 2 Trisra laghus + 2 drutams.

(2) 3 Khanda laghus and a drutam.

(3) 1 Chaturasra laghū + anudrutam + 1 drutam.

(4) 1 Misra laghu + 2 drutams.

24. Distinguish between :—

(*a*) musical sound and noise ;

(*b*) āhata nada and anāhata nada ;

(*c*) svara and sruti ;

(*d*) arohana and avarohana ;

(*e*) purvanga and uttaranga,

25. (*a*) Give some instances of svara-groups in :—

i. Arohana-krama. ii. Avarohana-krama.

(*b*) Say whether the following svara-groups are in the arohana-krama or avarohana-krama with reasons :

(i) g m P (ii) m p D (iii) p g r s
(iv) n d p m (v) m g R (vi) n p M
(vii) m d ṙ s (viii) g p d ṡ.

26. What is a sthāyi ? Name the three principal sthayis.

27. Give a few phrases of your own in the Mayamalavagaula raga.

28. Give reasons for the fact that Mayamalavagaula is best suited for practising the preliminary svara exercises.

29. Explain the terms pitch, intensity and timbre.

30. It is common experience that in a music concert, the music becomes effective, only some time after its commencement. The effect is greater, if the audience is large and the atmosphere somewhat moist. How do you account for this ?

31. Write a short essay on the greatness of music.

32. Set suitable words to the following phrases in Mayamalavagaula and sing them :—

1.	g r G	2.	g m P	3.	d n S
4.	n s n d P	5.	p d P m g	6.	P m g r s
7.	N d p m g	8.	g m p d P	9.	G m g r s
10.	g m p d n s	11.	d n s r S	12.	s n d n S

33. Sing the following phrases in Mayamalavagaula :—

1.	n s n d P m g	2.	g m p d n s r S
3.	s n d n s r G	4.	M g r s n d p d n S
5.	S n d p d n d p m G	6.	D p m g m p d n d P
7.	P m g r s n d n n S	8.	g m p d p m g r S

34. Passage for musical dictation. :—

Mayamalavagaula – Adi.

P , m g r s n	s r g m	P d n
S , n d p m g	m p d n	S ;

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S , m g r s n	d p d n	s n s r
S , n d p	P , m g r	S ; ‖

35. Passage for sight singing :—

Mayamalavagaula —Adi.

G , m g r s n	s r g m	p d p m
P , d p m g	m p m p D	P ;
R , d p m	g m p d	n d p m
G , m g r s n	d n s r	S ;
S , s n d p m	g m p d	n s r s
N , s r s s n	s r g r	G ;
M , g r s–S	, n d p	m g m p
g m p d n s r s	n d P	, m g r S ; ‖

36. The following are half-avarta passages in ragas mentioned. Complete the passages by supply— another half avarta music of your own in the respecti ragas :—

(*a*) Mayamalavagaula– Adi tala

G , m g r s n   s r g m   p d p m

(*b*) Kambhoji - Adi tala

D , n d p m g   m p d p   d n d p

(*c*) Sankarabharana - Adi tala

P , m g r s n   s r g m   g r s n

(*d*) Kalyani - Adi Tala

S , s n d p m   G - n d p m g r